AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	Page 1 of 2

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. *(If applicable)*
0002	09/15/2006		

6. ISSUED BY	CODE 00010	7. ADMINISTERED BY *(If other than Item 6)*	CODE 00010
Bureau of Reclamation - PNRO 1150 N Curtis Rd, Ste 100 Boise, ID 83706-1234		Bureau of Reclamation - PNRO 1150 N Curtis Rd, Ste 100 Boise, ID 83706-1234	

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State and Zip Code)*		
No Contractor Information Available	(X)	9A. AMENDMENT OF SOLICITATION NO. 06SQ101641
	(X)	9B. DATED *(SEE ITEM 11)* 08/31/2006
		10A. MODIFICATION OF CONTRACT/ORDER NO.
CODE FACILITY CODE		10B. DATED *(SEE ITEM 13)*

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[X] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers [ ] is extended, [X] is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS.
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	
[ ]	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
[ ]	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
[ ]	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
[ ]	D. OTHER *(Specify type of modification and authority)*

E. IMPORTANT: Contractor [ ] is not, [ ] is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

Replace page 2 and page 4 of the statement of work

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER *(Type or print)*		16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)* DARLENE LARRONDO	
15B. CONTRACTOR/OFFEROR _____ *(Signature of person authorized to sign)*	15C. DATE SIGNED	16B. United States of America BY _____ *(Signature of Contracting Officer)*	16C. DATE SIGNED

No Funding Information

Line Item Number	Description	Delivery Date (Start date to End date)	Quantity	Unit of Issue	Unit Price	Total Cost

Solicitation No. 06SQ101641 Becker Investigations at Tieton Dam Yakima Project, Washington

No Changed Line Item Fields

Previous Total:
Modification Total:
Grand Total:

BECKER INVESTIGATIONS AT TIETON DAM YAKIMA PROJECT, WASHINGTON

1. General

This work order involves the coordination of several groups to complete the following tasks:

- Becker Penetration Tests (BPT) with Pile Driving Analysis (PDA)
- Friction pullback testing of selected intervals in BPT holes
- Case Pile Wave Analysis Program (CAPWAP) for selected depths in BPT holes

2. Location

All field work will take place on the upstream slope of Tieton Dam. Tieton Dam is an earthfill and rockfill embankment structure located on the Tieton River about 30 miles northwest of Yakima, Washington. The dam was constructed between 1917 and 1925, and is a major feature of the Yakima Project. The following types of materials will be encounteredin the drilling:

Embankment (Em) – These materials are reddish-brown with some portions extremely oxidized, derived from locally borrowed Quaternary Glacial Drift, consisting of a heterogeneous mixture of silt, sand, gravel, cobbles, and boulders. This Drift material was reworked and placed by semi-hydraulic methods, washed into place, with the intention being to create a zoned embankment with a "clay puddle core" just upstream of the corewall and a more pervious, sandy zone just downstream of the corewall. The upstream clay puddle core was investigated in DH-92-2 and found to be a silty sand (SM). The embankment is thought to contain higher percentages of coarse material as distance increases both upstream and downstream away from the corewall. Both the upstream and downstream embankments are bermed and armored with slope protection igneous rock.

<<Riprap - The riprap consists of a 5-ft thick layer of large rock placed on the upstream face of the dam embankment as armor protection from wave action. The rock consists of hard, durable angular, blocks of andesite and basalt (volcanic rocks) that typically range from 2 to 4 ft in diameter.>>

Quaternary Alluvium (Qal) – These stream deposited materials are unconsolidated, grey to green to brown, composed of igneous and metamorphic boulders and cobbles with gravel, sand and fines. The finer-grained portions are stratified.

Quaternary Glacial Drift, Younger (Qgy) – This deposit consists of a heterogeneous mixture of fines, sand, gravel, cobbles and boulders. The sands and fines are brown in color. This material was deposited by a second glacial episode in the Tieton River valley and has likely experienced some reworking by the river. This unit is named the Evans Creek Drift on published geologic maps.

Quaternary Glacial Drift, Older (Qgo) – This deposit consists of a heterogeneous mixture of fines, sand, gravel, cobbles and boulders. The sands and fines are green or greenish-brown in color. This material was deposited by the first recorded glacial episode and disturbed by the river flow and the younger glacier. This unit is named the Hayden Creek Drift on published geologic maps.

Tertiary Andesite /Microdiorite (Ta) – This bedrock unit is aphanitic to fine grained, intrusive igneous rock ranging in age from upper Oligocene to Pliocene (28 – 4 million years ago). Fresh rock is greenish blue to bluish grey when dry, changing to reddish brown when exposed to weathering processes. Core samples recovered were fresh (W1) to moderately weathered (W5), with weathering

3.3.1.6 A 1/4-inch N.P.T. T-fitting from the bounce chamber pressure gage, which is to allow for the connection of an electric transducer and automated data collection system provided by the Government. The hose between the bounce chamber and the energy monitor shall remain free of obstructions, including oil and other debris at all times. This unobstructed hose shall be maintained by blowing out the hose with compressed air or by other means prior to each Becker hole and as directed by Reclamation's Field Representative.

3.3.2 Pullback Testing

Provide pullback force and displacement measurement equipment for Standard Penetration testing developed by GRL, Inc. for the Federal Highway Administration. The strain (force) transducers will be monitored by signal conditioning units and fed into a laptop computer. The displacement will be monitored with a string/tape extensometer/potentiometer. The equipment is commercially available and does not require special fabrication.

3.3.3 Becker PDA

Provide PDA equipment suitable for obtaining continuous data to estimate the energy transferred to the top of the Becker Hammer drive casing and to correct to Nb_{30} for each one-foot drive interval. PDA measurements are to be taken with force and acceleration transducers on the drill string by an instrumented pipe section with a Pile Dynamics, Inc. pile driving analyzer. This dynamic measurement system cannot be used to measure static pullback forces. The PDA procedure compiles data to be used by the CAPWAP.

Provide equipment and labor to perform CAPWAP analyses, using the recorded PDA data from each respective BPT borehole sounding. CAPWAP analyses shall be presented within the report, including the rationale for selecting the BPT hole intervals for which the CAPWAP analyses are performed. The intervals for CAPWAP analysis shall be selected by Reclamation TSC representative with the assistance of the contractor. Results from the CAPWAP analyses will be used in the conversion of Becker Hammer penetration resistance data into equivalent Standard Penetration Test (SPT) resistance N1(60) values.

3.3.4 Products

3.3.4.1 Backfill materials: medium size bentonite chips, or for deeper holes bentonite for pumped slurry.

3.4 Becker Drilling

3.4.1 General

The Becker geotechnical investigation program shall be conducted at the locations described in Tables 1 **and 2** below, as conditions allow. Reclamation's Field Representative will choose the order in which the boreholes will be investigated. **This requirement is for drilling through an estimated 5-ft thickness of riprap armor on the face of the dam in each of the holes. The Contractor will be responsible for this drilling activity and can use any suitable drilling method for advancing the hole through the riprap, subject to approval by the COTR. The Contractor will not be required to perform Becker hammer tests in this portion of the hole.** All locations shown in Tables 1 are an estimate of hole locations and depths.

High resistance may be encountered during drilling due to encountering cobbles and boulders. Each BPT sounding shall be advanced at least 5 feet into bedrock, to refusal, or as determined by Reclamation's Field Representative present at the site. Estimated depths to bedrock and elevations for each hole are listed in Table 1. Refusal is defined as 1-inch advancement of the drive casing after 200 blows at maximum effort. Refusal prior to reaching bedrock depth may require abandoning the BPT sounding and retesting at an adjacent location. Refusal criteria for penetrations within the bedrock will be determined by Reclamation's Field Representative in the field, but will not be more stringent than that mentioned above.